W/ 612,422

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TOTAL

FULL ESTIMATED COST

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FILE 'USPATFULL' ENTERED AT 16:38:52 ON 14 OCT 2006
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

\*\*\* YOU HAVE NEW MAIL \*\*\*

=> s polyanionic (4a) polymer?

L1 1243 POLYANIONIC (4A) POLYMER?

=> s 11 and conjugate

L2 136 L1 AND CONJUGATE

=> s 12 and nanoparticle

L3 23 L2 AND NANOPARTICLE

=> s 13 and phosphate

L4 19 L3 AND PHOSPHATE

=> dup rem 14

PROCESSING COMPLETED FOR L4

L5 19 DUP REM L4 (0 DUPLICATES REMOVED)

=> d 15 bib abs 1-19

L5 ANSWER 1 OF 19 USPATFULL on STN

AN 2006:254317 USPATFULL

Dioxetane-nanoparticle assemblies for energy transfer detection systems, methods of making the assemblies, and methods of using the assemblies in bioassays

IN Sparks, Alison, N. Andover, MA, UNITED STATES Wang, Zhixian, Winchester, MA, UNITED STATES Edwards, Brooks, Cambridge, MA, UNITED STATES Juo, Rouh-Rong, Allston, MA, UNITED STATES

PI US 2006216768 A1 20060928

AI US 2005-221895 A1 20050909 (11) PRAI US 2004-608130P 20040909 (60)

DT Utility

FS APPLICATION

LREP MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903, US

CLMN Number of Claims: 31 ECL Exemplary Claim: 1

DRWN 15 Drawing Page(s)

LN.CNT 1067

AB Assemblies comprising nanoparticles and chemiluminescent substrates such

as dioxetanes are provided. The assemblies can be used in assays to detect the presence and/or amount of a single analyte or multiple analytes in a sample. Methods of making the assemblies are also described.

```
ANSWER 2 OF 19 USPATFULL on STN
L5
       2006:247138 USPATFULL
AN
ΤI
       Cyclodextrin-based polymers for therapeutics delivery
       Davis, Mark E., Pasadena, CA, UNITED STATES
IN
       Insert Therapeutics, Inc., Pasadena, CA, UNITED STATES (U.S.
PA
       corporation)
       US 2006210527
                               20060921
PΙ
                          A1
ΑI
       US 2006-354593
                          A1
                               20060215 (11)
       US 2005-653409P
                           20050216 (60)
PRAI
DT
       Utility
       APPLICATION
FS
LREP
       FISH & NEAVE IP GROUP, ROPES & GRAY LLP, ONE INTERNATIONAL PLACE,
       BOSTON, MA, 02110-2624, US
CLMN
       Number of Claims: 39
ECL
       Exemplary Claim: 1
DRWN
       12 Drawing Page(s)
LN.CNT 4040
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to novel compositions of therapeutic
       polymeric compounds designed as carriers for small molecule therapeutics
       delivery and pharmaceutical compositions thereof. In some embodiments,
       the small molecule therapeutic is attached to the polymer by a
       photocleavable linker. The polymeric compounds may also employ targeting
       agents. By selecting from a variety of linker groups and targeting
       ligands the polymers present methods for controlled delivery of the
       therapeutic agents. On reaching a targeted site in the body of a
       patient, the linker can then be cleaved by the shining of ultraviolet,
       visible, or infrared wavelength light onto the site. The methods provide
       reduced toxicity and local delivery of therapeutics. The invention also
       relates to methods of treating subjects with the therapeutic
       compositions described herein. The invention further relates to methods
       for conducting a pharmaceutical business comprising manufacturing,
       licensing, or distributing kits containing or relating to the polymeric
       compounds described herein.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L5
     ANSWER 3 OF 19 USPATFULL on STN
AN
       2006:81234 USPATFULL
ΤI
       Biodegradable polyketal polymers and methods for their formation and use
IN
       Papisov, Mikhail I, Winchester, MA, UNITED STATES
PΙ
       US 2006069230
                          Α1
                               20060330
ΑI
       US 2003-501565
                               20030114 (10)
                          Α1
       WO 2003-US1017
                               20030114
                               20051107 PCT 371 date
PRAI
       US 2002-348333P
                           20020114 (60)
DΤ
       Utility
```

LN.CNT 3667 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Number of Claims: 104

Exemplary Claim: 1

4 Drawing Page(s)

APPLICATION

FS

LREP

CLMN

ECL

DRWN

The present invention relates to biodegradable biocompatible polyketals, methods for their preparation, and methods for treating animals by administration of biodegradable biocompatible polyketals. In one aspect,

CHOATE, HALL & STEWART LLP, TWO INTERNATIONAL PLACE, BOSTON, MA, 02110,

a method for forming the biodegradable biocompatible polyketals comprises combining a glycol-specific oxidizing agent with a polysaccharide to form an aldehyde intermediate, which is combined with a reducing agent to form the biodegradable biocompatible polyketal. The resultant biodegradable biocompatible polyketals can be chemically modified to incorporate additional hydrophilic moieties. A method for treating animals includes the administration of the biodegradable biocompatible polyketal in which biologically active compounds or diagnostic labels can be disposed. The present invention also relates to chiral polyketals, methods for their preparation, and methods for use in chromatographic applications, specifically in chiral separations. A method for forming the chiral polyketals comprises combining a glycol-specific oxidizing agent with a polysaccharide to form an aldehyde intermediate, which is combined with a suitable reagent to form the chiral polyketal. A method for use in chiral separations includes the incorporation of the chiral polyketals in the mobile phase during a chromatographic separation, or into chiral stationary phases such as gels. The present invention further relates to chiral polyketals as a source for chiral compounds, and methods for generating such chiral compounds.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
ANSWER 4 OF 19 USPATFULL on STN
T.5
ΑN
       2006:68291 USPATFULL
TΙ
       Oxime conjugates and methods for their formation and use
TN
       Papisov, Mikhail I, Winchester, MA, UNITED STATES
       Yurkovetskiy, Alexander, Littleton, MA, UNITED STATES
PΙ
       US 2006058513
                          A1
                                20060316
       US 2003-521334
ΑI
                                20030718 (10)
                          A1
       WO 2003-US22584
                                20030718
                                20051027 PCT 371 date
PRAI
       US 2002-397283P
                           20020719 (60)
       Utility
DT
FS
       APPLICATION
LREP
       CHOATE, HALL & STEWART LLP, TWO INTERNATIONAL PLACE, BOSTON, MA, 02110,
CLMN
       Number of Claims: 62
ECL
       Exemplary Claim: 1
DRWN
       1 Drawing Page(s)
LN.CNT 4070
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
```

The present invention relates to biodegradable biocompatible polyketals, methods for their preparation, and methods for creating animals by administration of biodegradable biocompatible polyketals. In one aspect, a method for forming the biodegradable biocompatible polyketals comprises combining a glycol-specific oxidizing agent with a polysaccharide to form an aldehyde intermediate, which is combined with a reducing agent to form the biodegradable biocompatible polyketal. The resultant biodegradable biocompatible polyketals can be chemically modified to incorporate additional hydrophilic moieties. A method for treating animals includes the administration of the biodegradable biocompatible polyketal in which biologically active compounds or diagnostic labels can be disposed. The present invention also relates to chiral polyketals, methods for their preparation, and methods for use in chromatographic applications, specifically in chiral separations. A method for forming the chiral polyketals comprises combining a glycol-specific oxidizing agent with a polysaccharide to form an aldehyde intermediate, which is combined with a suitable reagent to form the chiral polyketal. A method for use in chiral separations includes the incorporation of the chiral polyketals in the mobile phase during a chromatographic separation, or into chiral stationary phases such as gels. The present invention further relates to chiral polyketals as a source for chiral compounds, and methods for generating such chiral

```
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 5 OF 19 USPATFULL on STN
L5
ΑN
       2006:47631 USPATFULL
ΤI
       Peptides whose uptake by cells is controllable
IN
       Jiang, Tao, San Diego, CA, UNITED STATES
       Olson, Emilia S., La Jolla, CA, UNITED STATES
       Whitney, Michael, San Diego, CA, UNITED STATES
       Tsien, Roger Y., La Jolla, CA, UNITED STATES
PA
       The Regents of the University of California, Oakland, CA, UNITED STATES
       (U.S. corporation)
PΙ
       US 2006041105
                          A1
                               20060223
AΙ
       US 2005-133804
                          A1
                               20050519 (11)
RLI
       Continuation-in-part of Ser. No. US 2003-699562, filed on 31 Oct 2003,
       PENDING
       Utility
DT
FS
       APPLICATION
       TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH
LREP
       FLOOR, SAN FRANCISCO, CA, 94111-3834, US
CLMN
       Number of Claims: 27
ECL
       Exemplary Claim: 1
DRWN
       69 Drawing Page(s)
LN.CNT 3032
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A generic structure for the peptides of the present invention includes
AR
       A-X-B-C, where C is a cargo moiety, the B portion includes basic amino
       acids, X is a cleavable linker sequence, and the A portion includes
       acidic amino acids. The intact structure is not significantly taken up
       by cells; however, upon extracellular cleavage of X, the B-C portion is
       taken up, delivering the cargo to targeted cells. Cargo may be, for
       example, a contrast agent for diagnostic imaging, a chemotherapeutic
       drug, or a radiation-sensitizer for therapy. X may be cleaved
       extracellularly or intracellularly. The molecules of the present
       inventnon may be linear, cyclic, branched, or have a mixed structure.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
```

```
L5
     ANSWER 6 OF 19 USPATFULL on STN
ΑN
       2005:305453 USPATFULL
ΤI
       Nanoparticular targeting and therapy
IN
       Prokop, Ales, Nashville, TN, UNITED STATES
       Davidson, Jeffrey M., Nashville, TN, UNITED STATES
       Carlesso, Gianluca, Nashville, TN, UNITED STATES
       Roberts, David, Bethesda, MD, UNITED STATES
                               20051201
PΙ
       US 2005266090
                          A1
ΑI
       US 2005-125438
                               20050510 (11)
                          A1
       Continuation-in-part of Ser. No. US 2004-833370, filed on 28 Apr 2004,
RLI
       PENDING
PRAI
       US 2003-466375P
                           20030429 (60)
       Utility
DT
FS
       APPLICATION
LREP
       Benjamin Aaron Adler, ADLER & ASSOCIATES, 8011 Candle Lane, Houston, TX,
       77071, US
CLMN
       Number of Claims: 34
ECL
       Exemplary Claim: 1
DRWN
       1 Drawing Page(s)
LN.CNT 1384
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention provides biocompatible, low molecular weight
AΒ
       nanoparticulate formulations that are designed to retain and deliver
       therapeutics over an extended time course. The therapeutic may be
```

conjugated or adsorbed to the periphery of the corona or conjugated to a

core polymer. The nanoparticles comprise targeting ligands also conjugated or adsorbed to the periphery of the corona and/or a contrast agent in the core of the nanoparticle. As such, methods of selective targeting and/or methods of noninvasive imaging using bioluminescence and/or magnetic resonance imaging. Also provided are methods of delivering to and, optionally, imaging of a cell or tissue. Further provided are methods of producing the nanoparticles in batch or continuous mode via simple mixing or laminar flow.

#### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
L5
    ANSWER 7 OF 19 USPATFULL on STN
AN
       2005:286830 USPATFULL
ΤI
       Method for detecting analytes based on evanescent illumination and
       scatter-based detection of nanoparticle probe complexes
IN
       Storhoff, James J., Evanston, IL, UNITED STATES
       Lucas, Adam, Arlington Heights, IL, UNITED STATES
       Muller, Uwe R., Waukegan, IL, UNITED STATES
       Bao, Yijia Paul, Mount Prospect, IL, UNITED STATES
       Senical, Michael, Wheeling, IL, UNITED STATES
       Garimella, Viswanadham, Vernon Hills, IL, UNITED STATES
       Nanosphere, Inc. (U.S. corporation)
PA
                               20051110
PΙ
       US 2005250094
                          A1
ΑI
       US 2004-995051
                          A1
                               20041122 (10)
       Continuation-in-part of Ser. No. US 2004-854848, filed on 27 May 2004,
RLI
       PENDING
PRAI
       US 2003-474569P
                           20030530 (60)
       US 2003-499034P
                           20030829 (60)
                           20031104 (60)
       US 2003-517450P
       US 2004-567874P
                           20040503 (60)
DΨ
       Utility
FS
       APPLICATION
       MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP, 300 S. WACKER DRIVE, 32ND
LREP
       FLOOR, CHICAGO, IL, 60606, US
       Number of Claims: 47
CLMN
ECL
       Exemplary Claim: 1-75
DRWN
       34 Drawing Page(s)
LN.CNT 3163
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The invention provides methods of detecting one or more specific binding
       analytes, such as nucleic acids and proteins, in the presence of a
       neutral or anionic polysaccharide, through light scattering techniques,
       where a change in light scattering caused by the formation of
       nanoparticle label complexes within the penetration depth of the
       evanescent wave of a wave guide signals the presence of the analyte.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L5
    ANSWER 8 OF 19 USPATFULL on STN
       2005:10440 USPATFULL
AN
ΤI
       Nanoparticular tumor targeting and therapy
```

# Davidson, Jeffrey M., Nashville, TN, UNITED STATES Carlesso, Gianluca, Nashville, TN, UNITED STATES

PI US 2005008572 A1 20050113 AI US 2004-833370 A1 20040428 (10)

Prokop, Ales, Nashville, TN, UNITED STATES

Roberts, David, Bethesda, MD, UNITED STATES

PRAI US 2003-466375P 20030429 (60)

DT Utility

IN

FS APPLICATION

LREP Dr. Benjamin Adler, ADLER & ASSOCIATES, 8011 Candle Lane, Houston, TX, 77071

CLMN Number of Claims: 112 ECL Exemplary Claim: 1 DRWN No Drawings

LN.CNT 1635

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention provides a series of biocompatible, nanoparticulate formulations that are designed to retain and deliver peptides such as anti-angiogenic factors over an extended time course. The nanoparticles can be targeted to a cell or tissue by targeting ligands crosslinked or conjugated to the corona of the nanoparticles. In addition to selective targeting, the nanoparticles also may perform noninvasive imaging using bioluminescence and/or magnetic resonance imaging via a contrast agent in the core of the nanoparticle. Also provided are methods of delivering to and, optionally, imaging of a cell or tissue. Furthermore, methods of producing the nanoparticles in batch or continous mode via simple mixing or micromixing.

# CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 9 OF 19 USPATFULL on STN

AN 2004:227382 USPATFULL

TI Methods of biosensing using fluorescent polymers and

quencher-tether-ligand bioconjugates

IN Kushon, Stuart A., Santa Fe, NM, UNITED STATES
Kumaraswamy, Sriram, Santa Fe, NM, UNITED STATES
Xia, Wensheng, Albuquerque, NM, UNITED STATES
Jones, Robert M., Albuquerque, NM, UNITED STATES
Ley, Kevin D., Santa Fe, NM, UNITED STATES
McBranch, Duncan, Santa Fe, NM, UNITED STATES
Whitten, David G., Albuquerque, NM, UNITED STATES

PI US 2004175768 A1 20040909

AI US 2003-712004 A1 20031114 (10)

PRAI US 2002-426034P 20021114 (60)

DT Utility

FS APPLICATION

LREP Supervisor, Patent Prosecution Services, PIPER RUDNICK LLP, 1200 Nineteenth Street, N.W., Washington, DC, 20036-2412

CLMN Number of Claims: 57

ECL Exemplary Claim: 1

DRWN 9 Drawing Page(s)

LN.CNT 1175

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Complexes of a biotinylated fluorescent polymer and a biotin binding protein and solid supports coated with the fluorescent polymer complexes are described. The complexes can be used as sensors for detecting biological recognition events (e.g., nucleic acid hybridization reactions or enzymatic induced polypeptide cleavage). Methods of making the complexes and methods of using the complexes for detecting the presence and/or amount of a target analyte in a sample are also described. The target analyte can be an enzyme (e.g.,  $\beta$ -secretase) or a nucleic acid (e.g., a single stranded or double stranded nucleic acid).

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 10 OF 19 USPATFULL on STN

AN 2004:177797 USPATFULL

TI Nanoparticulate composition for efficient gene transfer

IN Prokop, Ales, Nashville, TN, UNITED STATES

Davidson, Jeffrey M., Nashville, TN, UNITED STATES Carlesso, Gianluca, Nashville, TN, UNITED STATES Unutmaz, Derya, Nashville, TN, UNITED STATES

PI US 2004136961 A1 20040715

AI US 2003-609722 A1 20030630 (10)

RLI Continuation-in-part of Ser. No. US 2003-356139, filed on 31 Jan 2003, PENDING Continuation-in-part of Ser. No. US 1998-169459, filed on 9 Oct

```
1998, GRANTED, Pat. No. US 6726934
                           19971009 (60)
PRAI
      US 1997-62943P
DT
      Utility
FS
      APPLICATION
      Benjamin Aaron Adler, ADLER & ASSOCIATES, 8011 Candle Lane, Houston, TX,
LREP
      Number of Claims: 38
CLMN
      Exemplary Claim: 1
ECL
       9 Drawing Page(s)
DRWN
LN.CNT 1182
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention provides compositions comprising a water-based
       core solution and a water-based corona solution surrounding the core
       solution. The compositions comprise polyanionic
      polymers and salts and polycationic polymers and cations and is
       useful for adenoviral delivery of a gene or delivery of another drug.
       The compositions may be nanoparticulate, microcapsular or form a
      polymeric sheet. Also provided are methods of use for the compositions.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
    ANSWER 11 OF 19 USPATFULL on STN
AN
       2004:101725 USPATFULL
TI
       Cyclodextrin-based polymers for therapeutics delivery
IN
       Cheng, Jianjun, Arcadia, CA, UNITED STATES
       Davis, Mark E., Pasadena, CA, UNITED STATES
       Khin, Kay T., San Gabriel, CA, UNITED STATES
PA
       Insert Therapeutics, Inc., Pasadena, CA, UNITED STATES (U.S.
       corporation)
ΡI
       US 2004077595
                          A1
                               20040422
      US 2003-656838
ΑI
                          A1
                               20030905 (10)
PRAI
      US 2002-408855P
                           20020906 (60)
      US 2002-422830P
                           20021031 (60)
      US 2003-451998P
                           20030304 (60)
DT
      Utility
FS
      APPLICATION
      ROPES & GRAY LLP, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624
LREP
      Number of Claims: 35
CLMN
ECL
      Exemplary Claim: 1
DRWN
       12 Drawing Page(s)
LN.CNT 4117
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       The present invention relates to novel compositions of therapeutic
       cyclodextrin containing polymeric compounds designed as a carrier for
       small molecule therapeutics delivery and pharmaceutical compositions
       thereof. These cyclodextrin-containing polymers improve drug stability
       and solubility, and reduce toxicity of the small molecule therapeutic
      when used in vivo. Furthermore, by selecting from a variety of linker
       groups and targeting ligands the polymers present methods for controlled
       delivery of the therapeutic agents. The invention also relates to
      methods of treating subjects with the therapeutic compositions described
      herein. The invention further relates to methods for conducting
       pharmaceutical business comprising manufacturing, licensing, or
       distributing kits containing or relating to the polymeric compounds
       described herein.
```

### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- L5 ANSWER 12 OF 19 USPATFULL on STN
- AN 2004:69995 USPATFULL
- TI Nanoparticle polyanion conjugates and methods of use thereof in detecting analytes
- IN Storhoff, James J., Evanston, IL, UNITED STATES Letsinger, Robert L., Bloomington, IN, UNITED STATES

```
Hagenow, Susan R., Salem, WI, UNITED STATES
PA
       Nanosphere, Inc. (U.S. corporation)
PΙ
       US 2004053222
                          A1
                               20040318
ΑI
       US 2003-612422
                          A1
                               20030702 (10)
PRAI
       US 2002-393255P
                           20020702 (60)
DT
       Utility
FS
       APPLICATION
       Emily Miao, McDonnell Boehnen Hulbert & Berghoff, 32nd Floor, 300 S.
LREP
       Wacker Drive, Chicago, IL, 60606
       Number of Claims: 50
CLMN
ECL
       Exemplary Claim: 1
DRWN
       6 Drawing Page(s)
LN.CNT 1179
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AR
       This invention provides polyanionic polymer
       conjugates containing non-nucleotide polyanionic
       polymers that are useful in detecting target analytes such as
       proteins or small molecules. The invention also provides nanoparticles
       bound to polyanionic polymer conjugates and methods
       of preparation and use thereof. The polyanionic
       polymer conjugates have the formula:
       L--O--[PO.sub.2--O--Z--O].sub.n--PO.sub.2--O--X
       wherein n ranges from 1 to 200; L represents a moiety comprising a
       functional group for attaching the polyanion polymer to the
       nanoparticle surface; Z represents a bridging group, and X
       represents Q, X' or --Q--X', wherein Q represents a functional group for
       attaching a recognition probe to the polyanion polymer, and X'
       represents a recognition probe.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 13 OF 19 USPATFULL on STN
L_5
AN
       2003:294281 USPATFULL
ΤI
       Nanoparticles having oligonucleotides attached thereto and uses therefor
IN
       Park, So-Jung, Austin, TX, UNITED STATES
       Taton, Thomas Andrew, Little Canada, MN, UNITED STATES
       Mirkin, Chad A., Wilmette, IL, UNITED STATES
PΙ
       US 2003207296
                          Α1
                               20031106
                               20021008 (10)
AΙ
       US 2002-266983
                          Α1
       Continuation-in-part of Ser. No. US 2001-8978, filed on 7 Dec 2001,
RLI
       PENDING Continuation-in-part of Ser. No. US 2001-927777, filed on 10 Aug
       2001, PENDING Continuation-in-part of Ser. No. US 2001-820279, filed on
       28 Mar 2001, PENDING Continuation-in-part of Ser. No. US 2001-760500,
       filed on 12 Jan 2001, PENDING Continuation-in-part of Ser. No. US
       2000-603830, filed on 26 Jun 2000, GRANTED, Pat. No. US 6506564
       Continuation-in-part of Ser. No. US 1999-344667, filed on 25 Jun 1999,
       GRANTED, Pat. No. US 6361944 Continuation-in-part of Ser. No. US
       1999-240755, filed on 29 Jan 1999, ABANDONED Continuation-in-part of
       Ser. No. WO 1997-US12783, filed on 21 Jul 1997, PENDING
                           20011009 (60)
PRAI
       US 2001-327864P
       US 2000-254418P
                           20001208 (60)
       US 2000-255236P
                           20001211 (60)
       US 2001-282640P
                           20010409 (60)
       US 2000-224631P
                           20000811 (60)
       US 2000-192699P
                           20000328 (60)
                           20001208 (60)
       US 2000-254392P
       US 2000-255235P
                           20001211 (60)
       US 2000-176409P
                           20000113 (60)
                           20000626 (60)
       US 2000-213906P
                           20000426 (60)
       US 2000-200161P
                           19960729 (60)
       US 1996-31809P
DT
       Utility
```

FS APPLICATION

LREP MCDONNELL BOEHNEN HULBERT & BERGHOFF, 300 SOUTH WACKER DRIVE, SUITE

3200, CHICAGO, IL, 60606

CLMN Number of Claims: 677

ECL Exemplary Claim: 1 DRWN 75 Drawing Page(s)

LN.CNT 12981

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The invention provides methods of detecting a nucleic acid. The methods comprise contacting the nucleic acid with one or more types of particles having oligonucleotides attached thereto. In one embodiment of the method, the oligonucleotides are attached to nanoparticles and have sequences complementary to portions of the sequence of the nucleic acid. A detectable change (preferably a color change) is brought about as a result of the hybridization of the oligonucleotides on the nanoparticles to the nucleic acid. The invention also provides compositions and kits comprising particles. The invention further provides methods of synthesizing unique nanoparticle-oligonucleotide conjugates, the conjugates produced by the methods, and methods of using the conjugates. In addition, the invention provides nanomaterials and nanostructures comprising nanoparticles and methods of nanofabrication utilizing nanoparticles. Finally, the invention provides a method of separating a selected nucleic acid from other nucleic acids.

### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 14 OF 19 USPATFULL on STN

AN 2003:194162 USPATFULL

TI Targeted multivalent macromolecules

IN Danthi, S. Narasimhan, Mountain View, CA, UNITED STATES Bednarski, Mark David, Los Altos, CA, UNITED STATES Wartchow, Charles Aaron, San Francisco, CA, UNITED STATES Choi, Hoyul Steven, San Jose, CA, UNITED STATES

PA TARGESOME, INC. (U.S. corporation)

PI US 2003133972 A1 20030717

AI US 2002-159596 A1 20020530 (10)

RLI Continuation-in-part of Ser. No. US 2001-976254, filed on 11 Oct 2001, PENDING

PRAI US 2000-239684P 20001011 (60)

US 2001-309104P 20010731 (60)

US 2001-312435P 20010815 (60)

US 2001-294309P 20010530 (60)

DT Utility

FS APPLICATION

LREP SWANSON & BRATSCHUN L.L.C., 1745 SHEA CENTER DRIVE, SUITE 330, HIGHLANDS RANCH, CO, 80129

CLMN Number of Claims: 44

ECL Exemplary Claim: 1

DRWN 32 Drawing Page(s)

LN.CNT 3801

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Targeted macromolecules comprising a linking carrier and more than one targeting entity are provided, as well as methods for their preparation and use.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 15 OF 19 USPATFULL on STN

AN 2003:187436 USPATFULL

TI Targeted multivalent macromolecules

IN Wartchow, Charles Aaron, San Francisco, CA, UNITED STATES DeChene, Neal Edward, Morgan Hill, CA, UNITED STATES Pease, John S., Los Altos, CA, UNITED STATES Shen, Zhimin, Palo Alto, CA, UNITED STATES

```
Trulson, Julie, San Jose, CA, UNITED STATES
       Bednarski, Mark David, Los Altos, CA, UNITED STATES
       Danthi, S. Narasimhan, Mountain View, CA, UNITED STATES
       Zhang, Michael, San Jose, CA, UNITED STATES
       Choi, Hoyul Steven, San Jose, CA, UNITED STATES
PA
       TARGESOME, INC. (U.S. corporation)
PΙ
       US 2003129223
                          A1
                               20030710
       US 2002-158777
AΙ
                          Α1
                               20020530 (10)
       Continuation-in-part of Ser. No. US 2001-976254, filed on 11 Oct 2001,
RLI
       PENDING
PRAI
       US 2000-239684P
                           20001011 (60)
       US 2001-309104P
                           20010731 (60)
       US 2001-312435P
                           20010815 (60)
       US 2001-294309P
                           20010530 (60)
DΤ
       Utility
FS
       APPLICATION
LREP
       SWANSON & BRATSCHUN L.L.C., 1745 SHEA CENTER DRIVE, SUITE 330, HIGHLANDS
       RANCH, CO, 80129
       Number of Claims: 39
CLMN
ECL
       Exemplary Claim: 1
DRWN
       32 Drawing Page(s)
LN.CNT 3784
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Targeted therapeutic agents, comprising a linking carrier, a therapeutic
       entity associated with the linking carrier, and at least one targeting
       entity are provided, as well as methods for their preparation and use.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L5
     ANSWER 16 OF 19 USPATFULL on STN
AN
       2003:50882 USPATFULL
       Drug delivery system exhibiting permeability control
TI
IN
       Prokop, Ales, Nashville, TN, UNITED STATES
PA
       NanoDelivery, Inc. (U.S. corporation)
PΙ
       US 2003035838
                               20030220
                          Α1
       US 6589563
                          B2
                               20030708
                               20020927 (10)
AΙ
       US 2002-256508
                         A1
       Division of Ser. No. US 2000-752056, filed on 29 Dec 2000, GRANTED, Pat.
RLI
       No. US 6482439
PRAI
       US 1999-173503P
                           19991229 (60)
DT
       Utility
FS
       APPLICATION
       ALSTON & BIRD LLP, BANK OF AMERICA PLAZA, 101 SOUTH TRYON STREET, SUITE
       4000, CHARLOTTE, NC, 28280-4000
CLMN
       Number of Claims: 15
ECL
       Exemplary Claim: 1
DRWN
       3 Drawing Page(s)
LN.CNT 613
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Microparticles and nanoparticles prepared from oppositely charged
       polymers are provided in which a drug is incorporated into the core and
       is conjugated to one polymer by a Schiff-base crosslink. The particles
       are suitable for use in injectable formulations in which the rate of
       release of the drug through the particle shell is slowed as compared to
       noncrosslinked drugs. Enzymatically degradable polymers can be
       incorporated in otherwise hydrolytically stable particles to provide
       drug release at particular sites within the body where the enzyme of
       interest is present.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
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Nanogel networks including polyion polymer fragments and biological

T.5

ΑN

ΤI

ANSWER 17 OF 19 USPATFULL on STN

2002:250831 USPATFULL

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agent compositions thereof
IN
       Kabanov, Alexander V., Omaha, NE, UNITED STATES
       Vinogradov, Sergey V., Omaha, NE, UNITED STATES
PΙ
       US 2002136769
                          A1
                               20020926
       US 6696089
                               20040224
                          B2
       US 2001-29682
AΙ
                          A1
                               20011221 (10)
RLI
       Continuation-in-part of Ser. No. US 1998-146651, filed on 3 Sep 1998,
       GRANTED, Pat. No. US 6333051
DT
       Utility
FS
       APPLICATION
      Mathews, Collins, Shepherd & Gould, P.A., Suite 306, 100 Thanet Circle,
LREP
       Princeton, NJ, 08540
       Number of Claims: 23
CLMN
ECL
      Exemplary Claim: 1
DRWN
      No Drawings
LN.CNT 1822
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to nanogel networks having at least one
       cross-linked polyionic polymer fragment and at least one nonionic
       water-soluble polymer fragment, and compositions thereof, having at
       least one suitable biological agent.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L5
     ANSWER 18 OF 19 USPATFULL on STN
AN
       2002:60718 USPATFULL
ΤI
       Drug delivery system exhibiting permeability control
IN
       Prokop, Ales, Nashville, TN, UNITED STATES
PΙ
       US 2002034552
                               20020321
                          A1
       US 6482439
                               20021119
                          B2
AΙ
       US 2000-752056
                          A1
                               20001229 (9)
PRAI
      US 1999-173503P
                           19991229 (60)
DT
       Utility
FS
       APPLICATION
      ALSTON & BIRD LLP, BANK OF AMERICA PLAZA, 101 SOUTH TRYON STREET, SUITE
LREP
       4000, CHARLOTTE, NC, 28280-4000
CLMN
       Number of Claims: 15
      Exemplary Claim: 1
ECL
       3 Drawing Page(s)
DRWN
LN.CNT 613
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
      Microparticles and nanoparticles prepared from oppositely charged
       polymers are provided in which a drug is incorporated into the core and
       is conjugated to one polymer by a Schiff-base crosslink. The particles
       are suitable for use in injectable formulations in which the rate of
       release of the drug through the particle shell is slowed as compared to
       noncrosslinked drugs. Enzymatically degradable polymers can be
       incorporated in otherwise hydrolytically stable particles to provide
       drug release at particular sites within the body where the enzyme of
       interest is present.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L5
     ANSWER 19 OF 19 USPATFULL on STN
ΑN
       97:104145 USPATFULL
ΤI
       Microcapsules of predetermined peptide(s) specificity (ies), their
       preparation and uses
IN
       Speaker, Tully J., Philadelphia, PA, United States
       Sultzbaugh, Kenneth J., Philadelphia, PA, United States
       Temple University of the Commonwealth System of Higher Education,
PA
       Philadelphia, PA, United States (U.S. corporation)
PΙ
       US 5686113
                               19971111
ΑI
       US 1995-408052
                               19950321 (8)
DT
       Utility
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FS Granted

EXNAM Primary Examiner: Nutter, Nathan M.

LREP Ratner & Prestia

CLMN Number of Claims: 42 ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 1708

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CAS INDEXING IS AVAILABLE FOR THIS PATENT.

An aqueous core microcapsule has a capsular wall provided with a peptide(s) of pre-determined binding specificity(ies) appended to the surface, the wall being the reaction product of an anionic polymer or salt thereof and a polyamine, salt thereof, mixtures thereof, or mixtures thereof with monoamines. The aqueous core may contain an active ingredient(s), and be targeted for delivery to specific cell tissues. The microcapsules are provided as a composition and in a kit with instructions for use in imaging, diagnosis, therapy, vaccination, and other applications.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.